

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

<i>In re</i> Application of:	)	
Kotani <i>et al.</i>	)	Group Art Unit: 1648
Serial No. 10/594,443	)	Examiner: Chen
	)	Confirmation No.: 5782
Filed: December 20, 2006	)	Atty. Dkt. No. 007123.00001

For: **COMPOSITION HAVING ANTITUMOR EFFECT**

**DECLARATION OF TOSHIHIRO NAKAJIMA UNDER 37 C.F.R. § 1.132**

U.S. Patent and Trademark Office  
Randolph Building  
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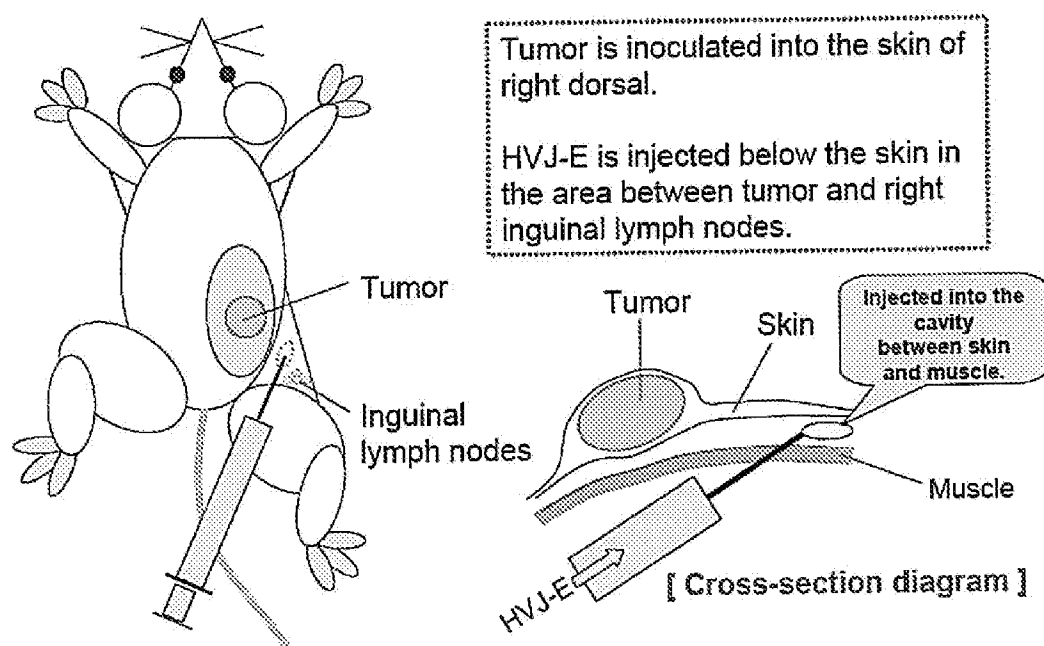
Sir:

I, Toshihiro Nakamima, declare as follows:

1. I am the CEO of GENOMIDEA Inc., which is one of the assignees of Serial No. 10/594,443 and a subsidiary of Angen MG, the other assignee. My *curriculum vitae* was attached as Exhibit 1 to my first declaration dated January 5, 2010.
2. This Declaration describes experiments which evaluated the efficacy of HVJ-E in tumor growth inhibition after subcutaneous injection in a human prostate cancer xenograft model. The xenograft model used was male, six week-old C.B-17/*lcr-scid/scid* Jcl mice (SCID mice), approximately 20-25 g in body weight. These mice were inoculated intradermally with  $2 \times 10^6$  human PC-3 prostate cancer cells.
3. A lyophilized formulation of HVJ-E prepared from human HEK293 host cells was used as a test substance in these experiments. The vehicle (50 mg/ml trehalose, 4.38 mg/ml

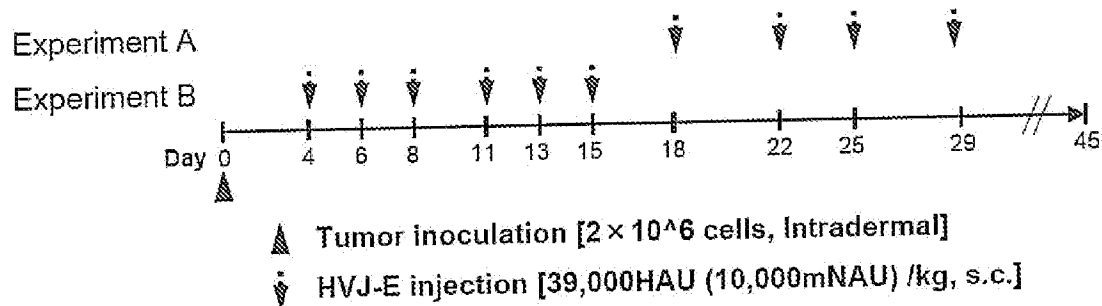
sodium chloride, 0.57 mg/ml disodium hydrogen phosphate, anhydrous, and 0.13 mg/ml monobasic potassium phosphate) was used as a control. The HVJ-E (39,000 HAU/mouse) was injected into the cavity between the skin and the muscle in the area between the tumor and the animals' right inguinal lymph nodes, as shown in Figure 1, below.

**FIG. 1. The administration site of HVJ-E (subcutaneous injection)**



4. The effect of injections 2 times a week for 2 weeks, starting on day 18 after tumor injection (Experiment A) and 3 times a week for 2 weeks, starting on day 4 after tumor injection (Experiment B) were examined. Tumor volume was measured on days 32-45 in Experiment A and on days 18-45 in Experiment B. The two experiments (A and B) are outlined in Figure 2.

Figure 2.



5. The results of Experiment A are shown in Figure 3. The results of Experiment B are shown in Figure 4. Statistically significant tumor growth inhibition was achieved in the HVJ-E treatment groups in each of Experiments A and B. No negative effect on body weight was observed.

Figure 3.

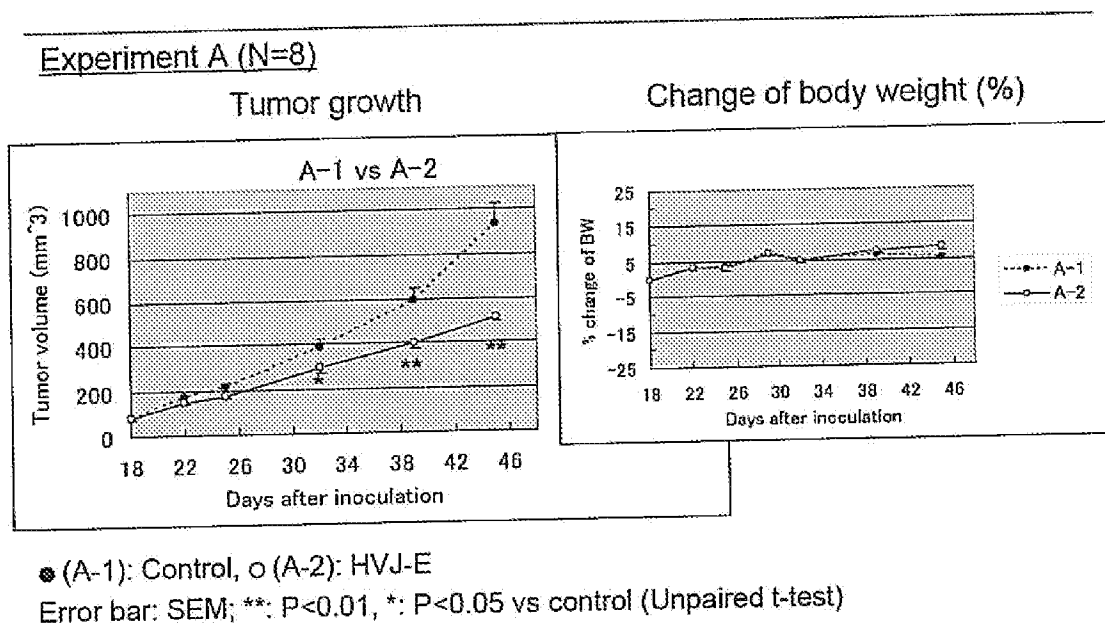
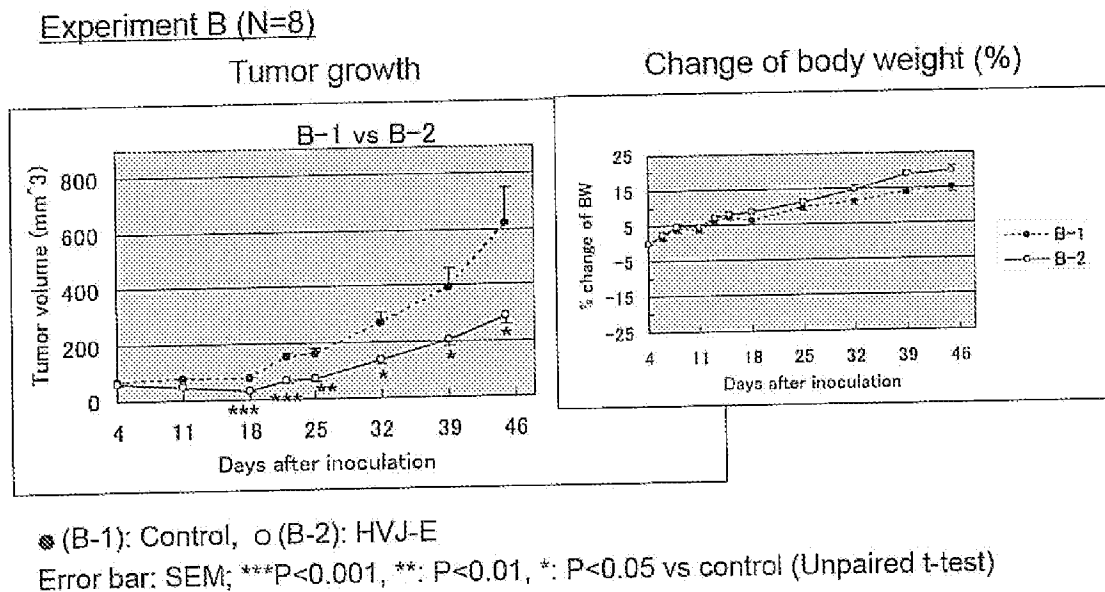


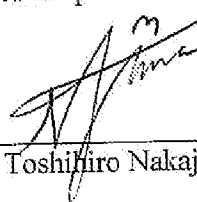
Figure 4.



6. The experiments described above demonstrate the ability of HVJ-E administered subcutaneously to reduce tumor size.

7. All statements I made in this declaration of my own knowledge are true. I believe all statements made on information and belief to be true. I made these statements with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the patent.

Dated: 30th June, 2010.

  
 Toshikuro Nakajima